



RESOURCES EXPORT

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The export capacity crisis

With minerals on the rebound and food exports in big demand, the secret is out.

From Port Williams to Valdez, the Americas face a looming shortage of export capacity, and stakes are higher for B.C. than for anywhere else on the western seaboard.

Clients are always right. My own clients are also very sharp. They've got to be.

They manage the uncertainty and technical complexity of ports.

The business of financing, building and operating port facilities is no enterprise for the dim.

Nor is an export terminal a project for the short-sighted: from initial concept to operation, a decade may pass before the first ship comes to call.

With such a long horizon for planning, it's surprising how ill-prepared some ports are to weather economic storms, and how many more are completely unequipped to capture the upswing of changing markets.

Last year, drought in Russia sold out capacity at North American grain terminals.

Australia, too, has faced recent drought, and in Europe and Asia consecutive weak harvests have put unprecedented demand on food exports from North and South America.

South American crops rely, in turn, on imports of Canadian potash.

Other minerals show healthy recovery as well.

U.S. coal now ships from Vancouver for lack of domestic terminals – a situation not slated to change, given restrictions on permitting.

Rail buy-ups by Warren Buffett speak volumes about what's to come. With rail and truck tariffs certain to increase, mining in Western Canada will benefit from the movement to produce exportable resources close to existing ports.

The latest take on “eat local” may be “export local.”

No more Prince Ruperts around

Meanwhile, developers have combed every metre of coastline on these continents in search of another perfect deep-water port, but no more Prince Ruperts lie undiscovered in the Americas.

The remaining sites are beset by high development cost, and government burdens cancel any near-term profits.

As for the long term, nationalization (in some countries) threatens to eliminate those profits too.

Throughout the hemisphere, environmental permitting takes years and frequently wields the deathblow.

With a scarcity of sites and so many barriers to execution, why weren't the ports of today built bigger?

In the past, initial return on investment mattered most. The “build it and they will come” attitude that inspired grand shopping centres and office buildings never caught on in the world of bulk terminals.

Rather than anticipate growth, it got deferred to future expansion projects, reactive measures that were slow to capitalize on surges in export demands.

But today's lower cost of money, volatile export markets and growing fears about licensing impart significant present value to future years of port projects.

It suggests that planning should encompass the life of the terminal from the outset.

So will tomorrow's ports be designed with this bolder, more ambitious vision? The answer lies partly with consultants, whose analyses inform the decision process.

Engineering consultants excel at designing hardware, but not at pricing business risks.

To select the right capacity for their port, owners must weigh capital investment against the gamut of possible outcomes.

Engineers focus on average outcomes. When engineers fix terminal space at a percentage of the average yearly throughput, it reveals an incomplete grasp of risk management.

Accounting firms have proven more capable of placing design options in a standard financial framework when dealing with an uncertain future, so alternative plans can be compared.

A prospectus shows the investor scenarios of return – an 85% chance for a moderate return, a 5% probability of a huge upside and a 10% chance of significant loss.

Were different port designs presented this way, there is no doubt investors would choose to seek permit-

ting on – and build – bigger terminals than we have historically seen.

Statistical finance provides computer methods to explore these scenarios.

Methods making inroads

Of late, these methods made their debut in ports planning. However, a correct understanding of these methods has yet to permeate the industry.

At one lecture on “port simulation,” I watched ships and stockpiles dance around a computer screen, yet senior experts at the large ports-engineering firm couldn't define what simulation is.

The idea is simple: a simulation is an experiment; that experiment takes place on a computer, because the real port hasn't been built yet, or because a terminal cannot suspend its operations to test out new ideas.

Flashy videos may impress, but insights emerge only when thousands of scenarios have been simulated. Then unexpected opportunities surface together with “black swan events” that stifle operations, such as long queues of waiting ships.

To grasp financial consequences, analysts need to simulate not just the movements of ships and minerals but also the movements of markets for ships and minerals.

For example, demurrage – the cost of chartering dry-bulk carriers – has seen extreme fluctuations over the last decade.

In short, a combination of engineering and financial methods promises to transform the master planning of ports, but the revolution is still young.

As fewer new sites get permitted, existing terminals will have to grow and become more resilient to market fluctuations.

Global integration of food, mineral and energy supplies will raise the stakes in the bulk export sector, especially for B.C. ■

“The latest take on ‘eat local’ may be ‘export local’”

– Parker Shectman, principal, OOTLINC

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